necessarily be somewhat arbitrary."¹⁸⁷ The court also acknowledged that the Commission is "entitled to deference in its line-drawing when it makes a reasoned decision."¹⁸⁸ The court directed the Commission to "address the relevant data and provide adequate record support and reasoning for whatever level of support it ultimately selects upon remand."¹⁸⁹

- 52. In the Recommended Decision, the Joint Board recommended that the Commission continue using the 135 percent national average cost benchmark. First, the Joint Board found that evidence of nationwide urban and rural rate comparability supported continued use of this benchmark. The Joint Board reasoned that attainment of reasonably comparable rural and urban rates is a key factor in determining an appropriate benchmark. The Joint Board stated that both the Joint Board and the Commission have previously considered rates to be affordable and reasonably comparable, and found that data from the recent GAO Report supports this conclusion. The Joint Board stated that "[b]ased on data contained in the GAO Report, it appears that six years after passage of the Act the national averages of rural, suburban and urban rates for residential customers diverge by less than two percent. We believe that the comparability of average rural and urban rates supports continued use of the 135 percent cost benchmark."
- 53. In addition, the Joint Board concluded that standard deviation analysis supports continued use of the 135 percent benchmark. Verizon argued that rural rates within two standard deviations of the mean urban rate, as reflected in the GAO Report, should be considered

¹⁸⁷ Id ("That recognition might justify arbitrarily picking a point within a narrow range, but does not justify doing so in the wide range present here.")

¹⁸⁸ *ld*.

¹⁸⁹ Id at 1203.

¹⁹⁰ Recommended Decision, 17 FCC Rcd at 20728-29, para. 34, supra note 21.

¹⁹¹ Id; citing Qwest, 258 F.3d at 1202.

See United States General Accounting Office, Telecommunications. Federal and State Universal Service Programs and Challenges to Funding (GAO-02-187, Feb. 4, 2002) (GAO Report). The GAO's objectives were to report on rates and examine how the rates and costs of providing local telephone service varied throughout the United States. GAO Report at 28. To do so, the GAO gathered data on local telephone rates in 50 states and the District of Columbia. The GAO collected sample rate data from three different categories of population density—central city, suburban and rural. GAO Report at 28-29. Up to 11 samples of residential and business local service rates were collected from each state. See GAO Report at 28-30 for a further description of the process used in the selection of places for sample rates. The rate results of the data collection, which the GAO conducted from May to September 2001 and is explained in detail in the report, are displayed in a chart format in Appendix IV of the GAO Report.

Recommended Decision, 17 FCC Rcd at 20728-29, para. 34; see also id. at 20732, para. 40 ("The GAO Report suggests that more federal support is not necessary because urban and rural rates are similar.")

¹⁹⁴ *Id* at 20729-30, para. 35.

reasonably comparable, ¹⁹⁵ and that the cost benchmark level of 135 percent is justified because it is nearly equivalent to two standard deviations above the national average cost per line. ¹⁹⁶ The Joint Board recognized that, unlike the rate data in the GAO Report, the cost data is not normally distributed. The Joint Board stated that the objective of the non-rural support mechanism is to provide support to states with the highest average costs, however, so it is appropriate to use the two-standard-deviation measurement to identify such high-cost states, even though this measurement may identify more than expected in a normal distribution. ¹⁹⁷ Based on this information, the Joint Board concluded that the 135 percent benchmark is a reasonable dividing line separating high-cost states from the remainder of average and low-cost states. ¹⁹⁸

54. The Joint Board also determined that cluster analysis supports the 135 percent cost benchmark. Cluster analysis is an analytical technique that arranges information according to specified variables so that relatively homogeneous groups, or "clusters," can be identified. The Joint Board used cluster analysis "to identify groups of states that had similar cost characteristics, thereby warranting different treatment regarding universal service support." Based on cost estimates used to determine non-rural high-cost support in 2002, the cluster analysis identified a high-cost, rural cluster of states that matched the group of states currently receiving support under the non-rural mechanism. Accordingly, the Joint Board concluded that the current benchmark of 135 percent distributes support to states appropriately.

Verizon reasoned that Congress's intent was that federal support be sufficient to maintain the range of rates existing at the time the 1996 Act was adopted, and that rates have not changed substantially since 1996, so the range of existing rates, as reflected in the GAO Report, should be used to determine what is reasonably comparable. *Id* In a normal distribution, data points within two standard deviations of the mean will comprise approximately 95 percent of all data points. *Id* at 20728-30, paras. 34, 36.

¹⁹⁶ Id at 20729-30, para. 35. With the cost data used to determine 2002 support, a benchmark of two standard deviations above the mean was equivalent to 132 percent of the national average cost. Id. at 20730, para. 36 n.93.

¹⁹⁷ Id. at 20730, para. 36 n.91 ("We are interested in providing support to states with more high-cost lines, so it is appropriate to use the two standard deviation measurement to identify outliers even though this measurement may identify more than expected in a normal distribution. The current non-rural high-cost support mechanism provides support to eight out of 52 jurisdictions (50 states, the District of Columbia and Puerto Rico), or 15% of the jurisdictions.")

¹⁹⁸ Id at 20730, para. 36.

¹⁹⁹ Id at 20730-31, para. 37.

²⁰⁰ Id. ("Specifically, states were sorted from lowest- to highest-cost based on statewide average cost per loop. Clusters were identified in this ranking if the difference in average costs between states was greater than 'cluster split differences' ranging from 2.5 to 0.5. Under this analysis, Mississippi was the first to break out into a separate cluster, and the second was the District of Columbia. The first group of states to break out into a separate rural, high-cost cluster included Kentucky, Maine, Alabama, Vermont, Montana, West Virginia and Wyoming. The remaining states, ranging from New Jersey to Nebraska, formed a separate urban, low-cost cluster. When Mississippi and the District of Columbia, the respective high- and low-cost 'outliers,' were combined into the two larger clusters, 'cluster stability' was achieved for a wide range of numerical values from 2.5 to 0.85. 'Cluster stability' means that the same clusters are maintained even as the numerical values are varied, indicating a strong similarity among members of the cluster groups.") (footnotes omitted).

2. Discussion

- 55. We agree with the Joint Board that the current level of non-rural high-cost support is supported by GAO Report data showing that most rural and urban rates are reasonably comparable. We have expanded on the Joint Board's analysis of the GAO Report data by comparing individual rates in rural and high-cost areas served by non-rural carriers to the national urban rate benchmark adopted in this Order. We recognize, of course, that our analysis is not conclusive. In particular, the rate review and expanded certification process will give states the option of submitting additional data to demonstrate that factors other than basic service rates affect the comparability of rates in their states. As discussed in more detail below, however, the GAO Report contains the best data available regarding rates in rural and high-cost areas nationwide. Our analysis of the GAO Report data indicates that rates in rural and high-cost areas are reasonably comparable to those in urban areas nationwide, with limited exceptions.
- 56. Our analysis of the GAO Report data is set forth in Appendix C. For purposes of this analysis, we considered residential rates in the individual rural and high-cost areas served by non-rural carriers.²⁰³ We adjusted these rates in the GAO Report to include all of the charges in the basic rate template recommended by the Joint Board.²⁰⁴ We then compared the adjusted residential rates to the national urban rate benchmark adopted in this Order.²⁰⁵ As discussed

²⁰¹ Id. at 20728-29, para. 34.

²⁰² See supra part IV B.2; see infra part IV.D.2.a.

As discussed below, the Joint Board recommended that states review only residential rates at this time. See infra part IV.D. In addition, consistent with the definition of rural and high-cost areas that we adopt below for purposes of the rate review process, we considered only rates identified as "Non-MSA" by the GAO. See infra part IV D 2.b. We also limited our analysis to rates in areas served by non-rural carriers. Our analysis responds to criticism by some commenters that the Joint Board's analysis of average rates reported in the GAO Report failed to consider large rate differences between states, and that its analysis included extraneous data such as rates from areas served by rural carriers. See Maine Comments at 13-15; Qwest Comments at 7, Montana and Vermont Comments at 9-11.

The Joint Board recommended that the Commission establish a basic service rate template including the items in the Bureau's annual rate survey. See infra part IV.D 1. We adjusted the rural rates from the GAO-Report by adding \$8.78 to each rate to reflect additional charges included in the Bureau's rate survey data. Both the Bureau's 2003 Reference Book and the rate data in the GAO Report use the monthly charge for flat-rate service, where available, and a "representative rate" in areas where only measured/message service is available. The rates in the 2003 Reference Book also include subscriber line charges, taxes, 911 and other charges, whereas the rates in the GAO Report do not. See 2003 Reference Book at Table 1.1; GAO Report at 49. Thus, we adjusted the rates in the GAO Report to reflect these additional charges by adding the average 2002 charges reflected in the 2003 Reference Book for federal and state subscriber line charges (\$5.64) and for taxes, 911, and other charges (\$3 14), for a total of \$8 78. See 2003 Reference Book at Table 1.1. Although we recognize that the charges excluded from the GAO Report likely vary from state to state, we believe it is appropriate to use average adjustments in the absence of more specific data. We note that the rate template that states will use in the rate review process to compare rates will include the charges in the 2003 Reference Book. See infra part IV.D.2 c. In addition, we note that the GAO rate data include any additional monthly charges for touch-tone service. The average urban residential rate in the 2003 Reference Book of \$23.38 includes \$0.04 to reflect the average additional charge for touch-tone service. See GAO Report at 46, 2003 Reference Book at Table 1.1.

²⁰⁵ See infra part IV D.2.a.

above, this benchmark presumes rates in rural and high-cost areas served by non-rural carriers to be reasonably comparable to urban rates nationwide if they deviate no further than two standard deviations above the national average urban rate in the Bureau's Reference Book.²⁰⁶

- 57. Our analysis of the GAO Report data indicates that, with limited exceptions, residential rates in rural and high-cost areas served by non-rural carriers are reasonably comparable to urban rates nationwide. Only three of the 51 jurisdictions included in the GAO Report Michigan, Vermont and Wyoming had residential rates in rural and high-cost areas served by non-rural carriers exceeding the national urban rate benchmark. Given the available data and based on our definition of reasonable comparability, we find that residential rates in rural and high-cost areas served by non-rural carriers generally are reasonably comparable to urban rates in most states. Those states where rates do not appear to be reasonably comparable, based on our analysis of the GAO Report data, will have the opportunity to provide additional information through the rate review and expanded certification process. 208
- 58. Some commenters maintain that the GAO Report has a number of flaws, including the general criticism that the GAO lacks expertise in the complexities of local exchange rates and that the size of the study is too small to be statistically valid. We disagree. The GAO was established for the very purpose of evaluating public programs and activities for Congress, and conducts audits, reviews, analyses and investigations on a regular basis. In this

See supra part IV B.2. Based on the 2003 Reference Book survey, the national urban rate benchmark is 138 percent of the average urban rate, with a dollar equivalent of \$32.28 2003 Reference Book, Table 1 1. The 2003 Reference Book shows that the average total monthly residential rate for local service in urban areas in 2002 is \$23.38 and the highest rate surveyed during that time was \$35.19. 2003 Reference Book, Tables 1.1, 1.3. As described in more detail in part IV.D.2.a., the urban rate benchmark is expressed as the percentage equivalent of two standard deviations above the average total monthly residential urban rate for local service in metropolitan areas surveyed in the 2003 Reference Book.

Based on the information before us, we believe that there are very different reasons for these three states to exceed the rate benchmark. For example, Michigan had a high monthly charge of \$43.95 for flat-rate service in 2001, but most customers subscribed to a low message-rate service of \$12.01 that includes 400 calls per month, considerably more calls than the "representative rate" the Bureau calculates when flat-rate service is not available. GAO Report at 59, note d. We note that the \$43.95 charge for monthly service in Michigan was applicable throughout the state. In Wyoming, rural residential rates were higher than the national urban rate benchmark in 2001, but single-line business rates were the same as residential rates, and most single-line business rates in Wyoming were lower than in many other states. Id at 58. We discuss below various possible approaches for analyzing residential rates in states that have rebalanced their rates as Wyoming has. See infra part V.

See infra part IV.D.2.e. We note that states also will be able to present information explaining why rates that appear to be reasonably comparable should not be considered reasonably comparable. See id.

Maine Comments at 12-15; Montana and Vermont Comments at 11; Qwest Comments at 6-7; Wyoming Comments at 5-6.

See GAO Report at 61 ("The General Accounting Office, the investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions.").

case, the GAO gathered a representative sample of up to 11 residential and business local service rates from every rate-setting jurisdiction, and concluded that the sample pool size it used was appropriate for purposes of its study. Given the experience and expertise of the GAO in general, and upon review of the GAO Report as a whole, we find that the data and conclusions in the GAO Report are generally reliable. 212

- 59. We also reject criticisms that the GAO did not adjust rates in different areas for differences in calling area size, service quality, or other characteristics.²¹³ These commenters essentially argue that local rates cannot be compared unless adjusted for any conceivable difference in local rate design policy. We recognize that states apply different ratemaking policies.²¹⁴ We agree with the Joint Board, however, that basic service rates provide a valid basis for evaluating rate comparability.²¹⁵ The rate review process and expanded certification will allow states to bring factors other than basic service rates to our attention if they believe that such factors affect the comparability of rates in their jurisdictions.²¹⁶
- 60. Furthermore, we reject criticisms that the GAO Report excludes certain charges that may vary from state to state.²¹⁷ As discussed above, we have adjusted the individual rates in the GAO Report to include an average of the additional charges in the basic rate template recommended by the Joint Board.²¹⁸ We recognize that these additional charges may vary from state to state; however, we conclude that it is appropriate to use average adjustments in the absence of more specific data.²¹⁹

See GAO Report at 28-30; see also supra note 192 and accompanying text.

See Recommended Decision, 17 FCC Rcd at 20728-29, para. 34; see supra note 21. See also AT&T Comments at 3-7; California Comments at 8-9; Verizon Reply Comments at 6-9.

Maine Comments at 15, Montana and Vermont Comments at 11-12.

See supra paras. 22-23.

Recommended Decision, 17 FCC Rcd at 20737-38, para. 51 ("When state basic service rates are at or below the rate benchmark level, then there should be a presumption that rates in that state are reasonably comparable to national urban rates.").

²¹⁶ See infra part IV.D.

Maine Comments at 15; Montana and Vermont Comments at 11-12. Although these commenters do not elaborate on which additional charges omitted in the GAO Report data are of concern, we assume that they refer to the list of excluded charges specifically described in the GAO Report. GAO Report at 49 ("the monthly tariff rates that we report exclude the federal Subscriber Line Change [sic]; federal, state, and local surcharges for items such as universal service funding, 911 service, and taxes; the federal excise tax; and long distance fees and associated universal service surcharges and other taxes.").

See supra note 204 and accompanying text.

In the future, no rate adjustment will be necessary to standardize the data collected as part of the state rate review and expanded certification process, because the basic service rate template used in this process will include the same elements as the 2003 Reference Book. See infra para 86.

- 61. Finally, we disagree with the claim by some commenters that the GAO did not choose consistent rates when more than one service plan was offered in an area, based on the single example of Michigan rates. The GAO Report states that rates listed are for unlimited service, where available. If unlimited service was not available, the GAO reports the tariffed rate for message service, assuming 100 5-minute calls per month for residential customers. In its report of listed rates, the GAO does in fact include the rate for unlimited service in Michigan, which was \$43.95 in all non-rural carrier service areas reported. He GAO notes, however, that, according to the Michigan Commission, most residential customers purchase a message-rate service that allows 400 calls per month at a base rate of \$12.01. From the example of Michigan rates, it appears that the GAO not only abides by its own parameters for the study and selects rates consistently, but also provides additional relevant information to enable an informed analysis of the data. Commenters provide no other examples of inconsistencies in the GAO's selection of rates, and we find none.
- 62. Turning to the Joint Board's use of standard deviation analysis, we agree with the Joint Board that standard deviation analysis of the relevant cost data supports the determination that the cost benchmark rejected by the court does in fact provide an appropriate level of non-rural high-cost support. 224 Standard deviation analysis is a commonly used statistical analysis that measures dispersion of data points from the mean of those data points. Both the Commission and state commissions have employed standard deviation analysis as a statistical standard for determining parity or comparability. In this proceeding, we use standard deviation analysis to measure the dispersion of statewide average costs per line, as estimated by the cost model, in order to identify states with significantly higher costs than the national

Maine Comments at 15; Montana and Vermont Comments at 11-12.

²²¹ GAO Report at 49.

²²² Id at 53 See also id at 59, note d.

²²³ Id.

Recommended Decision, 17 FCC Rcd at 20730, para. 36; See also California Comments at 8; Sprint Comments at 2-3; Verizon Comments at 11, Worldcom Reply Comments at 2.

Recommended Decision, 17 FCC Rcd at 20730, para. 36, See Verizon Reply Comments, Declaration of Eugene J Goldrick at 3-4, paras. 6-7.

Recommended Decision, 17 FCC Rcd at 20730, para. 36 & n 92; see also Verizon Reply Comments at 12. For example, the Commission has used standard deviation analysis to create thresholds for cost comparability. See Bell Operating Companies' Tariff for the 800 Service Management System, Tariff F C.C. No 1 and 800 Data Base Access Tariffs, 8 FCC Rcd 3242 (1993); Local Exchange Carriers' Rates, Terms and Conditions for Expanded Interconnection Through Physical Collocation for Special Access and Switched Transport, 12 FCC Rcd 18730 (1997). We note that, prior to the passage of the 1996 Act, the Commission considered setting a support benchmark in a universal service proceeding based on standard deviations. In the Matter of Amendment of Part 36 of the Commission's Rules and Establishment of a Joint Board, CC Docket No. 80-286, Notice of Inquiry, 9 FCC Rcd 7404 (1994); In the Matter of Amendment of Part 36 of the Commission's Rules and Establishment of a Joint Board, CC Docket No. 80-286, 10 FCC Rcd 12309, 12333, para. 55 (1995). The Commission did not resolve this proceeding due to the subsequent passage of the 1996 Act.

average. Consistent with the court's directive, standard deviation analysis provides an empirical method, based on relevant data, of identifying states with significantly higher costs than the national average that are likely to have difficulty maintaining comparable rates without federal support.²²⁷

- 63. The Joint Board staff analyzed state cost per line model run data for the year 2001. As some commenters observed, the graphed data have the characteristics of an asymmetrical lognormal curve. Following the Joint Board's analysis, Commission staff determined the standard deviation of the data for the years 2001 and 2002 and plotted where two standard deviations above the mean falls on the graph, as represented in the graphs provided in Appendix D. Based on 2002 data, a benchmark of two standard deviations above the national average cost defines ten states as having very high average costs for purposes of distributing non-rural support. ²³⁰
- 64. We conclude that two standard deviations is an appropriate threshold for purposes of determining non-rural high-cost support. As discussed above, to provide sufficient support for statutory purposes, the non-rural mechanism must provide enough support to enable states to achieve reasonable comparability of urban and rural rates, without overburdening consumers who indirectly fund the federal universal service support mechanisms through carrier universal service line items. As the Joint Board noted, two standard deviations translates approximately to a 135 percent national average cost benchmark and, therefore, approximately the same level of

See Qwest, 258 F.3d at 1202-3 Sprint Comments at 3 ("standard deviation analysis limits the arbitrary nature of the process and provides a recognized approach for identifying extreme values in a data set, based on all the values in that data set"), California Commission Comments at 8; Verizon Reply Comments at 10-13; Worldcom Reply Comments at 2.

The state cost per line model run data for 2001 used year end 2000 lines.

See Verizon Reply Comments, Declaration of Eugene R. Goldrick at 4, n.1 ("the state cost per line has a distributional asymmetry that is typical of data with a fixed lower bound of zero but no corresponding upper bound; the lower tail of the distribution is shorter than the upper tail. As a result, a greater proportion of states lie more than 2 standard deviations above the mean than lie 2 standard deviations below it."); see also Maine Comments, Statement of Dr. William Gillis at 30; Montana and Vermont Comments, Statement of Dr. William Gillis at 53 ("there exists credible analysis showing that the data are skewed to the right."). An asymmetrical lognormal curve is defined as an asymmetrical bell shape with a long tail of high measurement values. Staff used the software package BestFit – Probability Distribution Fitting for Windows, Version 4.5 by Palisade Corporation to confirm that the data forms an asymmetrical lognormal curve.

Appendix D. The 2002 cost per line model run data used year-end 2001 lines and the Delphi version of the cost model adopted by the Commission in January 2003. See Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Order, 18 FCC Rcd 41 (2003) (Delphi Order). Upon review of the graphed data, staff also determined that a benchmark set at two standard deviations above the mean will typically identify an average of 16 percent of the jurisdictions as high-cost states.

See Recommended Decision, 17 FCC Rcd at 20730, para. 36 (concluding, based on standard deviation analysis, that the current benchmark level is a "reasonable dividing line separating high-cost states from the remainder of average and low-cost states.").

See supra at part IV B.; see also Worldcom Reply Comments at 2.

non-rural support as has been provided in the past.²³³ We agree with the Joint Board that this is an appropriate level of non-rural support, based on evidence in the record that urban and rural rates have been and continue to be reasonably comparable, and because the principle of sufficiency requires that support be only as large as necessary to achieve the statutory objective.²³⁴ In sum, we conclude that a two-standard-deviation threshold strikes a fair balance between ensuring that states have enough federal support to ensure reasonable comparability of urban and rural rates, and avoiding the risks of excessive support.

applied standard deviation analysis.²³⁵ First, as the commenters acknowledge, the cost data need not be "normally distributed" in order to apply standard deviation analysis.²³⁶ Second, standard deviation analysis may be used to identify data points significantly different from the general population.²³⁷ In this case, standard deviation analysis identifies states that have average costs per line significantly higher than the average state cost per line. Standard deviation analysis is not applied here to perform "statistical hypothesis testing."²³⁸ Third, the Joint Board specifically addressed the empirical distribution of the cost data and recognized that a threshold set at two standard deviations above the national average cost identifies more data points than expected in a normal distribution.²³⁹ Fourth, the Joint Board did not "mechanically" apply standard deviation analysis,²⁴⁰ but explained the reasons underlying its conclusion that two standard deviations is an appropriate threshold.²⁴¹ Finally, the Joint Board did not suggest a "new and different formulation of the statutory language."²⁴² Rather, it recommended application of the two-

Recommended Decision, 17 FCC Rcd at 20729-30, para. 35.

²³⁴ Id at 20724, para. 16; see id at 20732, para 40 ("The GAO Report suggests that more federal support is not necessary because urban and rural rates are similar."); WorldCom Reply Comments at 2.

See Qwest Comments, Declaration of Dr. Aniruddha Banerjee at 6-9; Maine Comments, Statement of Dr. William Gillis at 29-31; Montana and Vermont Comments at 18-24; id., Statement of Dr. William Gillis at 51-54.

²³⁶ See Qwest Comments, Declaration of Dr. Aniruddha Banerjee at 9; Maine Comments, Statement of Dr. William Gillis at 30; Montana and Vermont Comments at 23; see also Verizon Reply Comments at 11-12; id., Declaration of Eugene R. Goldrick at 4. Finding the standard deviation among a set of data points is a mathematical calculation that may be performed regardless of how the data are distributed. Id.

²³⁷ See Verizon Reply Comments at 11-12; *id*, Declaration of Eugene R. Goldrick at 3-4.

Maine Comments, Statement of Dr. William Gillis at 29; Montana and Vermont Comments, Statement of Dr. William Gillis at 51. In his statement, Dr. Gillis states that "statistical hypothesis testing" may be used to decide "whether the mean value of a sample is significantly different from the mean value of a population or whether two samples may derive from the same population." Id

²³⁹ Recommended Decision, 17 FCC Rcd at 20730, n.91; see also Verizon Reply Comments, Declaration of Eugene R Goldrick at 5-6.

Owest Comments, Declaration of Dr. Aniruddha Banerjee, Ph D at n.7.

Recommended Decision, 17 FCC Rcd at 20730, n.91, id at para 35-6; see also Verizon Comments at 11.

²⁴² Montana and Vermont Comments at 21.

standard-deviation measurement as a rational method of determining a benchmark level that is suited to the goals of the 1996 Act. 243

- We further conclude that we should modify the national average cost benchmark by basing it on two standard deviations. The Joint Board recommended the existing 135 percent benchmark in part because it reasoned that a percentage-based benchmark provides certainty in the funding process.²⁴⁴ We are not persuaded, however, that a percentage-based benchmark provides greater certainty. The dollar equivalent of a cost benchmark will change each year, as the national average cost changes, regardless of whether it is percentage-based or calculated based on two standard deviations. In addition, basing the cost benchmark on two standard deviations responds to the court's directive by tying the benchmark more directly to the relevant data. 245 We believe that a benchmark based on two standard deviations is better justified than a 135 percent benchmark in light of the determination above that two standard deviations is an appropriate threshold for non-rural support. 246 Moreover, setting the cost benchmark at two standard deviations will respond to annual changes in the dispersion of statewide average costs per line relative to the national average. Therefore, we conclude that a benchmark based on two standard deviations is better suited to ensuring sufficient non-rural high-cost support over time.²⁴⁷ For these reasons, we adopt a cost benchmark based on two standard deviations above the national average cost per line.²⁴⁸
- 67. We do not rely on the Joint Board's cluster analysis in our determination of a cost benchmark. The Joint Board identified through cluster analysis, using 2001 cost estimates, the same group of states as those receiving support. We have performed additional cluster analyses on simulated model cost estimates for future years to determine whether there is likely to be a similar correspondence between the group of high-cost states defined by cluster analysis

²⁴³ Recommended Decision, 17 FCC Rcd at 20730, para. 36.

²⁴⁴ Id at 20731, para 38.

²⁴⁵ See Qwest, 258 F.3d 1191, 1203 (10th Cir. 2001) (instructing Commission on remand to "address the relevant data").

See supra paras. 62-64; see Montana and Vermont Comments at 24.

The rate review and expanded certification process will serve as a final check on the success of the non-rural high-cost support mechanism in achieving the ultimate goal of reasonably comparable rates. See infra part IV.D. Missouri Comments at 2; NASUCA Comments at 12. As discussed below, we may adjust the benchmark as necessary in the future based on analysis of the rate data.

We note that, pursuant to its delegated authority, the Bureau upgraded the cost model's computer language and corrected programming errors in Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Order, 18 FCC Rcd 41 (2003), recons pending, but deferred calculating support using the revised version of the model until after this Order on Remand. We anticipate that the Bureau will release an order updating line counts and other discrete input values used in calculating non-rural high-cost support following release of this Order on Remand, and that the revised version of the model will be used to calculate support based on the modified non-rural high-cost support methodology adopted herein beginning January 1, 2004.

²⁴⁹ Recommended Decision, 17 FCC Rcd at 20730, para. 36.

and those states receiving support based on a cost benchmark set at two standard deviations above the national average cost.²⁵⁰ The resulting clusters of states on the high-cost end of the spectrum generally correspond to the benchmark level, but do not appear likely to correspond exactly to the states receiving non-rural high-cost support each year.²⁵¹ We find it unnecessary to rely on cluster analysis because we believe our determination of a cost benchmark based on two standard deviations above the national average cost has adequate record support.²⁵²

68. We agree with the Joint Board and commenters that we should reject proposals to establish a lower threshold for non-rural support based on average urban cost. Because urban average costs are likely to be lower than urban average rates due to state universal service actions, an urban average cost benchmark would tend to exaggerate the need for federal support to ensure rural and urban rate comparability. Proponents of the urban cost benchmark maintain that the urban average cost is representative of rates in urban areas, and that statewide average costs are similarly representative of rates in rural areas, net of federal support. Yet, an average of urban costs – however "urban" is defined – does not proportionately relate to an urban rate because it does not take into account the effect of state mechanisms to balance rates. Rates in

Staff performed ten trials of cluster analysis on simulated cost data. A random number generator was applied to the fitted lognormal curve, described above, to simulate ten data sets of 52 cost data points, representing 52 jurisdictions. See supra note 229 and accompanying text. Staff used computer program XLSTAT version 5.1 to perform the "agglomerative hierarchical classification" of the "single-linkage" method of cluster analysis on the simulated data. See Qwest Comments, Declaration of Aniruddha Banerjee, Ph.D. at 11-12 & n.11. The computer program produced a dendrogram, a tree of clusters whose root is the class that contains all of the data points, for each simulated data set. From the dendrograms, staff was able to identify high-cost clusters with cluster stability. See Appendix E; see also supra note 200 and accompanying text.

We believe that the cluster analysis results generally support a benchmark set at two standard deviations above the mean. The simulated clusters on the high-cost end of the scale identify between three and thirteen states, with an average of six states See Appendix E A benchmark of two standard deviations above the mean using current actual data identifies ten states as having very high average costs for purposes of distributing non-rural high-cost support. This figure falls within the range of the simulated clusters.

We disagree with commenters who are opposed to use of cluster analysis because it does not provide insight into the amount of support sufficient for rate comparability. See Maine Comments at 16; Montana and Vermont Comments at 13. We do not behave the Joint Board intended to use cluster analysis as anything more than a verification to confirm that states with similar cost characteristics at the high-cost end of the spectrum receive support under the 135% benchmark See Verizon Reply Comments at 6-7.

Recommended Decision, 17 FCC Rcd at 20731-32, paras. 39-41; AT&T Comments at 15; California Comments at 9-10; Verizon Comments at 10; see supra paras. 27-28.

See Montana and Vermont Comments at 26. The commenters maintain that if support is to be cost-based, the mechanism must provide that cost levels net of support in rural areas are reasonably comparable to urban areas. In using an urban cost benchmark, with "urban" defined by population density, the commenters suggest that the urban cost benchmark represents "urban" costs. The commenters, however, do not recommend that the Commission compare the urban cost benchmark to specifically-defined rural costs, but generally to statewide averages. See also Maine Comments at 19-23.

These commenters include in their definition of urban average cost (by study area, wire center, density zone and area overlap) only those areas that they define as "urban." Maine Comments at 19-23; Montana and Vermont Comments at 40-44.

urban areas will tend to be driven up due to contributions in the aggregate made for state universal service funds, rate averaging or other state universal service mechanisms. Rates in rural areas will tend to be driven down in the aggregate due to the receipt of implicit and explicit support from such mechanisms. While a statewide average cost takes into account a state's efforts to achieve reasonable comparability of rates within the state by driving urban rates up and rural rates down through explicit or implicit support mechanisms, an urban average cost does not. In other words, the urban average cost will likely be disproportionately lower than the actual average urban rate. The imbalanced comparison of urban and statewide average costs, therefore, creates the appearance of urban and rural rate differences that are far greater than in reality. As a result, using an urban cost benchmark would cause the federal mechanism to provide more support than necessary to fulfill statutory requirements and to shoulder both federal and state responsibility in providing support. 256

69. Proponents of a lower threshold based on average urban cost point out that the 135 percent national average cost benchmark when defined in terms of urban average cost is close to the 70-80 percent discrepancy that the court stated it doubted was within a "fair range" for purposes of determining rate comparability.²⁵⁷ We find this argument misplaced. The court referred to a 70 to 80 percent discrepancy between urban and rural rates, yet the proponents of an urban cost benchmark rely on a discrepancy between urban and rural costs. 258 As discussed above, we define reasonable comparability for statutory purposes in terms of rates, not costs, and, based on our analysis of the relevant data, the discrepancy between urban and rural rates likely will remain well below 70 or 80 percent.²⁵⁹ Moreover, we reject the premise underlying this argument that the appropriate comparison for purposes of determining non-rural high-cost support is average urban cost, rather than national average cost. The threshold for non-rural high-cost support we adopt here is based on our analysis of the data in the record, which indicates that the current level of non-rural support is sufficient to achieve rate comparability. Adoption of a lower threshold without evidence that such a measure is required to ensure rate comparability would violate an aspect of sufficiency reaffirmed by the Joint Board - that the amount of support should be only as large as necessary to achieve the statutory goals.²⁶⁰

D. Rate Review and Expanded Certification Process

70. In order to induce states to achieve reasonably comparable rates, we adopt with minor changes the rate review and expanded certification process recommended by the Joint Board.²⁶¹ This rate review process will require the states to regularly examine whether the

²⁵⁶ AT&T Comments at 15-16.

²⁵⁷ Qwest, 258 F 3d at 1201 A 135 percent national cost benchmark yields roughly the same support amount and distribution as an average urban cost benchmark of 165 percent.

²⁵⁸ 1d, Maine Comments at 18, Montana and Vermont Comments at 25 and 47.

²⁵⁹ See supra at para 44.

²⁶⁰ Recommended Decision, 17 FCC Rcd at 20724, para. 16.

²⁶¹ Id at 20736-40, paras. 50-56.

residential rates paid by consumers in rural, high-cost areas served by non-rural carriers are reasonably comparable to those paid by urban consumers nationwide. We also will require each state annually to file with the Commission a certification stating whether its rural rates are reasonably comparable to urban rates nationwide. As part of the rate review and expanded certification process, we adopt a nationwide urban rate benchmark, below which rural rates may be presumed reasonably comparable to urban rates nationwide. In addition, we establish a basic service rate template for states to use to compare rates. We adopt, with slight modifications, the definition of "rural area" already contained in section 54.5 of the Commission's rules for the purpose of the rate review and expanded certification process. Finally, we adopt the Joint Board's recommendation that states be allowed to request further federal action based upon a demonstration that, despite the state's best efforts, federal non-rural support and state action together have not achieved reasonable comparability of rural and urban rates. 263

1. Background

- 71. In the Ninth Report and Order, the Commission determined that the primary federal role in achieving the statutory goal of reasonably comparable rural and urban rates is to enable reasonable comparability among states and the primary role of each state is to ensure reasonable comparability of rural and urban rates within its borders. The Commission adopted the Joint Board's earlier recommendation that the Commission "abstain from requiring any state action as a condition for receiving federal high-cost support." The Commission found it most appropriate for states to determine how non-rural high-cost support is used, "[b]ecause the support . . . is intended to enable the reasonable comparability of intrastate rates, and states have primary jurisdiction over intrastate rates." As a regulatory safeguard, the Commission required states that wish to receive non-rural high-cost support to certify annually that all such support will be used in a manner consistent with section 254(e). 267
- 72. As noted above, in *Qwest*, the Tenth Circuit required the Commission on remand to develop a mechanism to induce state action to ensure the reasonable comparability of rural and urban rates.²⁶⁸ Specifically, the court noted that the non-rural support mechanism adopted in

This rate benchmark is consistent with the definition of reasonable comparability that we adopt above. See supra paras. 38-44.

²⁶³ In the attached Further Notice of Proposed Rulemaking, we seek further comment on certain discrete aspects of the rate review and expanded certification process. *See infra* part V. We also seek comment on the rules, procedures and required showings for further federal action *Id*.

Ninth Report and Order, 14 FCC Rcd at 20454, para. 38.

²⁶⁵ *Id.* at 20469, para 67.

²⁶⁶ Id at 20483, para. 95.

²⁶⁷ Id at 20483, para 97; see 47 C.F R. § 54.313(a) (state must certify that support "will be used only for the provision, maintenance, and upgrading of facilities and services for which the support is intended").

²⁶⁸ Owest, 258 F.3d at 1203-04.

the Ninth Report and Order would result in reasonably comparable rates only if states implement their own universal service policies, but that the Ninth Report and Order did not include any inducements for state action or future inducements in the absence of reasonable comparability of rural and urban rates.²⁶⁹ The court acknowledged that the Commission may not be able to implement universal service by itself, and that it is therefore appropriate or even necessary for the Commission to rely on state action to implement universal service goals.²⁷⁰ The court concluded, however, that the Commission may not simply assume that the states will act on their own to preserve and advance universal service and that it must create some inducement—"a 'carrot' or a 'stick,' for example, or simply a binding cooperative agreement with the states"—for the states to implement universal service provisions.²⁷¹

In its Recommended Decision, the Joint Board recommended that the Commission 73. implement a rate review and expanded certification process.²⁷² Specifically, each state would be required to review its rural rates to determine if they were reasonably comparable to urban rates nationwide.273 The Joint Board recommended that the Commission establish a nationwide urban rate benchmark to facilitate this review.²⁷⁴ Each state would be required to file a certification with the Commission annually stating whether its residential rates in rural and high-cost areas served by non-rural carriers were reasonably comparable to urban rates nationwide.²⁷⁵ Rates less than the nationwide urban rate benchmark would be presumed reasonably comparable, and states could certify that their basic service rates in rural, high-cost areas are reasonably comparable without submitting rate information.²⁷⁶ A state would have the option of submitting additional rate data to demonstrate that factors other than basic service rates affect the comparability of their rates in high-cost areas.²⁷⁷ The Joint Board concluded that this process would satisfy the court's requirement for inducement of state action by "encourag[ing] states to scrutinize their rates . . ., to determine whether they are reasonably comparable, and if not, to take actions to make them reasonably comparable."278 The Joint Board also emphasized that its recommended

²⁶⁹ Id at 1203.

²⁷⁰ Id. at 1203-04.

²⁷¹ Id. at 1204.

²⁷² Recommended Decision, 17 FCC Rcd at 20736-40, paras. 50-56.

²⁷³ *Id*.

²⁷⁴ Id at 20736-38, para. 50, 52-53.

²⁷⁵ *Id.* at 20736-40, paras 50-51, 55-56.

²⁷⁶ *Id.* at 20736-38, paras. 50-51, 53.

For example, if its rural rates exceeded the benchmark, a state would be permitted to explain in its certification why its rural rates were reasonably comparable. *Id* at 20736-40, paras. 50-51, 55-56. Similarly, a state could explain in its certification that its rural rates were not reasonably comparable to nationwide urban rates, despite being within the safe harbor created by the nationwide urban rate benchmark *Id* at 20736-40, paras. 50, 53, 55-56.

²⁷⁸ *Id.* at 20737-38, para. 51.

approach affords the states maximum flexibility to regulate basic services and rates. 279

- 74. The Joint Board made several specific recommendations with respect to the rate review and expanded certification process, and suggested that the Commission seek further comment with respect to certain issues. The Joint Board recommended that the Commission base the rate benchmark on the most recent average urban residential rate shown in the Wireline Competition Bureau's annual Reference Book, as modified to reflect the most recent changes in subscriber line charges.²⁸⁰ The Joint Board suggested that a benchmark level of 135 percent of the nationwide average urban rate "[might] be appropriate," but suggested that the Commission seek further comment on this issue. 281 The Joint Board further recommended that the Commission establish a basic service rate template that instructs the states which rate elements to compare to the rate benchmark as part of their rate review. 282 The Joint Board recommended that this basic service rate template include the same items as the Bureau's Reference Book.²⁸³ The Joint Board suggested that rural, high-cost areas be defined as all wire centers with a line density less than 540 lines per square mile, but recommended that the Commission seek further comment on whether a different definition of rural, high-cost areas would be more appropriate.²⁸⁴ The Joint Board recommended that states review only residential rate information at this time. 285
- 75. The Joint Board further recommended that a state be permitted to request further federal action based on a showing that federal support and state action together were not sufficient to yield basic service rates in rural and high-cost areas served by non-rural carriers that were reasonably comparable to urban rates nationwide. This further action could include, but would not be limited to, additional targeted federal support or actions to modify calling scopes or improve quality of service where states have limited jurisdiction. The Joint Board recommended that further federal action be available only when the state demonstrates that it has already taken all reasonably possible steps and used all available state and federal resources to make basic service rates reasonably comparable. The Joint Board also recommended that the

²⁷⁹ Id.

²⁸⁰ Id at 20736, 20738, paras. 49 & n.124, 52.

²⁸¹ Id at 20736-38, paras. 50, 52-53.

²⁸² Id. at 20739, para. 54.

²⁸³ Id. These elements include the rate for a line with access to the public switched network, federal subscriber line charge, state subscriber line charge (if any), federal universal service fund charge, state universal service fund charge (if any), local number portability charge, telecommunications relay service charge, 911 charges, federal universal service credits (if any), state universal service credits (if any), and the federal excise tax. Id.

²⁸⁴ Id at 20736-37, para. 50 & n.125.

²⁸⁵ *Id* at 20738, para. 53.

²⁸⁶ Id at 20736-37, para. 50. The Joint Board also suggested that it may be appropriate to seek comment on whether states should eventually review business rates as well.

²⁸⁷ *Id*.

Commission develop exact procedures to be used in filing and processing requests for further federal action.²⁸⁹

2. Discussion

- 76. We agree with the Joint Board and commenters that, consistent with the court's decision in Owest, the rate review and expanded certification process will induce state action to ensure that rates in rural and high-cost areas served by non-rural carriers are reasonably comparable to urban rates nationwide.²⁹⁰ Each state will be required to review its rates in rural. high-cost areas served by non-rural carriers annually to assess their comparability to urban rates nationwide, and then to file a certification with the Commission regarding the comparability of rates. Moreover, a state that has not achieved reasonably comparable rural and urban rates must make a public certification explaining why it has not been able to achieve rate comparability, and must do so annually until it can certify that it has achieved reasonable rate comparability. We believe that this mandatory rate review will induce states to fulfill their obligations under the federal-state universal service partnership. As discussed above, our review of the record indicates that states generally are succeeding, some with federal support, in ensuring rate comparability.²⁹¹ The rate review and expanded certification process will ensure that state action to ensure rate comparability continues and, where state action has not achieved reasonable comparability, will create significant pressure on states to take action to achieve reasonable comparability. The annual certification will be a state's public representation that it has engaged in the required rate review. We believe that a state will make significant efforts to achieve rate comparability to avoid making repeated certifications that its rates are not reasonably comparable.292
- 77. We do not adopt other proposed state inducements at this time, which would pose significant jurisdictional or policy issues. We find that the record does not support claims that, to comply with the court's remand, we must require or induce all states to immediately remove implicit subsidies from intrastate rates through substantial increases in federal support.²⁹³ Our (Continued from previous page)

 288

 1d. at 20736-37, 20740, paras. 50, 56.

²⁸⁹ Id at 20740, para 56. The Joint Board specifically noted that the Commission should establish a time limit for determining whether further federal action would be provided. Id.

See 1d at 20737-38, para. 51; see also California Comments at 11, Missouri Comments at 2. In part V.D., below, we seek comment on providing additional inducements for state action to preserve and advance universal service through additional targeted federal support for high-cost wire centers in states that adopt explicit universal service mechanisms.

²⁹¹ See supra paras. 43, 57.

See Ninth Report and Order, 14 FCC Rcd at 20483, para. 97 ("As a regulatory safeguard, . . . we adopt rules in this Order requiring states that wish to receive federal universal service high-cost support for non-rural carriers within their territory to file a certification with the Commission . . Each certification shall become part of the public record maintained by the Commission.").

See supra para 26. Qwest warns that, without strong encouragement from the Commission, states are unlikely to replace implicit subsidies with explicit, competitively neutral funding mechanisms until a crisis point where implicit subsidies have been virtually eliminated. See e g., Qwest Comments at 7-8. SBC similarly claims that (continued....)

analysis of the GAO Report data confirms the Joint Board's finding that, six years after passage of the 1996 Act, urban and rural rates nationwide generally remained reasonably comparable.²⁹⁴ Carriers arguing that immediate, nationwide rate rebalancing is urgently needed have not provided data to quantify the implicit support in intrastate rates.²⁹⁵ Moreover, they do not seem to consider the possibility that competition may drive costs down so that the total amount of support needed may decrease as competition increases.²⁹⁶ We agree with the Wisconsin Commission that the impact of competition has not been geographically ubiquitous or long-lived enough to assess definitively its effect on rates for universal service purposes.²⁹⁷ As discussed above, we find that states continue to be in the best position to determine when to eliminate implicit support in their rate designs and establish explicit, sustainable universal service mechanisms.²⁹⁸ In the event that our review of the states' rate comparability certifications indicates that states are not, in fact, making sufficient efforts to achieve rate comparability, we will then consider whether it is necessary to institute stronger inducements. We do not foreclose the possibility of withdrawing non-rural support from a state or conditioning non-rural support on specific state action, if such action is found appropriate in the future.²⁹⁹

78. The steps we take today represent a measured response to the court's decision, and we will assess in the future whether additional inducements are necessary. Consistent with the Joint Board's recommendations, we believe that the approach we adopt establishes effective state inducements while affording the states maximum flexibility to regulate basic rates and services. We anticipate that the erosion of implicit support by competition will, in time, compel

²⁹⁴ See supra part IV.C.

NASUCA disputes SBC's claim that all residential rates are below cost and argues that for most companies residential service is "self-supporting." See NASUCA Reply Comments at 3-4. NASUCA argues that many non-rural carriers have the resources to ensure reasonably comparable rates without additional federal support, and urges the Commission to withhold support from carriers earning a healthy overall return, for example, in excess of 11.25% See NASUCA Comments at 5, 9 NASUCA provides interstate rate of return information for BellSouth, Qwest, SBC, and Verizon. See NASUCA Comments, Attachment A We agree with NASUCA that carriers claiming their residential rates are below cost should be required to substantiate their claims, but we believe that the states are in the best position to evaluate these claims. See NASUCA Reply Comments at 4.

Congress thought that lower costs would be a likely result of increased competition. See S. Rep. No. 23, 104th Cong., 1st Sess. 26 ("The Committee expects that competition and new technologies will greatly reduce the actual cost of providing universal service over time, thus reducing or eliminating the need for universal service support mechanisms as actual costs drop to a level that is at or below the affordable rate for such service in an area . . . ").

²⁹⁷ See Wisconsin Comments at 4

²⁹⁸ See supra para 22

Although we do not foreclose future action, we find that it would be inappropriate at this time to condition nonrural support on the achievement of rate comparability. Denying non-rural support to a high-cost state would have very serious effects on the rates paid by consumers in that state. We therefore decline to place such conditions on non-rural support without additional information regarding rate comparability and state action to achieve rate comparability.

states to replace those implicit support mechanisms with explicit support mechanisms, which will be sustainable in a competitive marketplace.³⁰⁰ We also believe that incentives in terms of additional federal support may be appropriate where states have eliminated implicit support and the resulting rebalanced rates are significantly higher than rates in other states.³⁰¹ In the Further Notice, therefore, we propose to make available additional targeted federal support for high-cost wire centers in most states as a positive incentive for those states to reform their implicit universal service mechanisms.³⁰²

79. The rate review and expanded certification process also will add a dynamic element to the non-rural high-cost support mechanism by enabling the Commission to assess on an ongoing basis whether combined federal and state actions continue to result in reasonably comparable rural and urban rates nationwide. With the information collected through this process, the Commission will be better able to assess how successfully the non-rural support mechanism ensures the reasonable comparability of rates, and to respond accordingly. For example, the data will better enable the Commission to identify any systemic problems with rate comparability that may arise with the advent of competition, and to determine whether any such problems should be addressed through adjustments to the cost benchmark level, further inducements for state action, or other measures.

a. Nationwide Urban Rate Benchmark

80. We adopt the Joint Board's recommendation that we establish an annually adjusted nationwide urban rate benchmark for the purpose of the rate review and expanded certification process. This rate benchmark will be used by the states and the Commission as a tool to assess the reasonable comparability of rates in rural and high-cost areas served by non-rural carriers to nationwide urban rates. As recommended by the Joint Board, we base the urban rate benchmark on the most recent average urban residential rate shown in the Bureau's Reference Book. The Bureau's annual Reference Book includes a sample of flat-rate services

See supra para. 22. As competition increases, it will be helpful to know whether more states are establishing explicit support mechanisms See, e.g., SBC Comments at 6 ("[T]he Joint Board and the Commission do not even have any information that would allow them to analyze state universal service mechanisms."). In the attached Further Notice, we seek comment on collecting additional information from the states to enhance our ability to assess whether or not federal and state mechanisms are resulting in reasonably comparable rates and to take appropriate action if they are not. See *unfra* part V.A.

³⁰¹ See infra part V.

³⁰² See infra part V.D.

Recommended Decision, 17 FCC Rcd at 20736-38, paras. 50-53 As explained above, the nationwide urban rate benchmark also will be used to define reasonable comparability of urban and rural rates. See supra paras. 38-42.

In contrast, the cost benchmark, discussed above in part IV.C., is used to identify the amount of federal support that, in combination with state action, is sufficient to achieve the Act's universal service goals, including reasonable comparability of rural and urban rates.

Recommended Decision, 17 FCC Rcd at 20738, para. 52

available in 95 cities from many regions of the country.³⁰⁶ The weighted average of urban rates in the *Reference Book* provides an appropriate baseline for the purpose of determining whether rates in rural areas are reasonably comparable to those in urban areas nationwide. However, because of the great variation in urban rates nationwide, we are not convinced that we should focus solely on the average urban rate in determining whether rural rates are reasonably comparable to urban rates.³⁰⁷ We find that using a standard deviation analysis, which measures the dispersion of urban rates from the average, to set the urban rate benchmark will appropriately reflect both the average and the variation of urban rates.³⁰⁸

81. We adopt an urban rate benchmark level of two standard deviations above the average urban rate in the *Reference Book*. Based on the most recent data, the current benchmark level is \$32.28, or 138 percent of the nationwide average urban rate.³⁰⁹ This benchmark level is similar to the 135 percent benchmark level that the Joint Board suggested we consider.³¹⁰ This benchmark level is also consistent with our conclusion above that Congress did not intend the 1996 Act to narrow the permissible range of urban and rural rates, but rather to ensure continued rate comparability with the advent of competition.³¹¹ The rate benchmark should therefore be set at a level that permits a rural rate to be presumed reasonably comparable to urban rates

The most recent survey includes data as of October 15, 2002. 2003 Reference Book, at 1-10.

See supra para. 39 See also Dixon, W., and Massey, F, Introduction to Statistical Analysis, Third Edition, McGraw-Hill Book Company, 1969. pp. 26-27 ("An important concept in statistics is that any average does not in itself give a clear picture of a distribution [of data]... Another type of measure which helps to clarify the shape of the distribution is one that indicates how the observations are spread out from the average. Such a measure could be called a measure of dispersion, spread, or variability")

For this reason, we reject arguments by commenters that ignore the variation in urban rates in suggesting appropriate urban rate benchmarks. For example, NASUCA notes that, using a 135 percent urban rate benchmark, customers in rural areas could potentially pay rates that are up to \$7.82 per month higher than the national average urban rate, and concludes without further analysis that rates greater than this could not be found reasonably comparable. NASUCA Comments at 15-16. NASUCA does not address the variation of urban rates or the fact that some urban areas have rates higher than 135 percent of the urban average rate. Similarly, Montana, Vermont, and Maine suggest that reasonably comparable rural rates must be within 125 percent of the nationwide average urban rate because a consumer would likely view price differences exceeding 25 percent as excessive, but fail to address how variation in urban rates nationwide should be reflected in the permissible variation of rural rates. Montana and Vermont Comments at 44-47, Maine Comments at 23-27; see also supra para. 44.

Based on the urban rate data in the 2003 Reference Book, the nationwide average urban rate currently is \$23.38. See Appendix B. We direct the Bureau to publish in future editions of the Reference Book both the average urban rate on which the benchmark will be based and the benchmark level as a dollar amount and as a percentage of the average, in order to facilitate the states' use of the benchmark in the rate review and expanded certification process The 2003 and prior editions of the Reference Book are available on the Commission website at www.fcc.gov/wcb/iatd/lec.html.

The Joint Board's suggested urban rate benchmark of 135 percent would place the benchmark at \$31.56, or 72 cents less than the benchmark we adopt. The Joint Board suggested that the Commission consider setting the rate benchmark at 135 percent of the average urban rate--because it had also recommended a cost benchmark level of 135 percent of the average cost per loop--but further develop the record to establish the appropriate rate benchmark. We have further developed the record through our analysis of rate data in the *Reference Book*.

³¹¹ See supra paras 39-40.

nationwide if it does not deviate from the average urban rate more than urban rates generally. For the purpose of establishing a safe harbor, two standard deviations is an appropriate measure of the amount of deviation commonly found in urban rates. We estimate that, based on the data in the *Reference Book*, 96 percent of urban rates nationwide are below the average urban rate plus two standard deviations.³¹² Although a rate benchmark of the average urban rate plus three standard deviations would encompass 98.5 percent of urban rates,³¹³ we find that the average plus two standard deviations better serves the rate benchmark's intended purpose of a safe harbor. A rate benchmark level of two standard deviations above the average urban rate will permit most states to presume that their rates in rural areas served by non-rural carriers are reasonably comparable to urban rates nationwide, thereby providing an effective safe harbor, but will require that states more closely scrutinize rural rates that approach the highest margin of urban rates nationwide and, therefore, are more likely to present problems of reasonable comparability.

82. Consistent with the Joint Board's recommendations, we emphasize that this benchmark merely creates a presumption regarding the reasonable comparability of rural and urban rates, and is not the sole test of whether rural and urban rates are reasonably comparable.³¹⁴ Factors such as the quality of service, the size of calling areas, or the availability of alternative rate plans could impact a state's review of the comparability of rural and urban rates. A state may conclude that its rural rates are reasonably comparable to nationwide urban rates even if they exceed the urban rate benchmark. Similarly, a state with rural rates below the urban rate benchmark may still conclude that its rural rates are not reasonable comparable to urban rates nationwide. We are not persuaded by the argument that setting a nationwide urban rate benchmark will effectively create a target rate for local service rates.³¹⁵ States are unlikely to abdicate their ratemaking authority due to the existence of this rate benchmark. Nor are we persuaded by the argument that we should not set a rate benchmark because administrative hurdles would prevent adjustments if costs or other factors used to calculate the rate benchmark change.³¹⁶ The nationwide urban rate benchmark we adopt will change annually based on

Our analysis of the urban rate data in the *Reference Book* demonstrates that a log-logistic distribution, rather than a normal distribution, best fits the data. In this log-logistic distribution, approximately 96 percent of the total area under the log-logistic curve (and, therefore, 96 percent of urban rates) is to the left (*i.e.*, below) the average plus two standard deviations. In contrast, if the data were normally distributed, approximately 97.5 percent of the total area under the normal curve would be to the left of the average plus two standard deviations.

The average urban rate plus three standard deviations is also normally a better estimate of the highest urban rate nationwide than the highest rate shown in the Reference Book's survey

Recommended Decision, 17 FCC Rcd at 20738, para. 53.

Wisconsin Comments at 5.

³¹⁶ Id We also do not agree with the Wisconsin Commission's suggestion that the nationwide urban rate benchmark should be indexed to household income levels. Id. at 6. As the Commission has previously found, using income to set an affordability benchmark "would over-emphasize income levels in relation to other non-rate factors that may affect affordability and fail to reflect the effect of local circumstances on the affordability of a particular rate." First Report and Order, 12 FCC Rcd at 8841, para. 115; see supra para 45. Moreover, household income does not, in itself, provide probative information with regard to whether rates in rural areas are reasonable comparable to rates in urban areas.

changes to the urban rates identified in the Bureau's *Reference Book*. Thus, the rate benchmark level will automatically change to reflect marketplace trends in rates, including changing costs and other factors in ratemaking.³¹⁷

b. Definition of Rural and High-Cost Areas

- 83. Based on our examination of the record in this proceeding, we adopt a modified version of the existing definition of "rural area" contained in section 54.5 of our rules for the purpose of determining whether rates in rural, high-cost areas served by non-rural carriers are reasonably comparable to urban rates.³¹⁸ Under this definition, a "rural area" is, with the exceptions discussed further below, any non-metropolitan county or county-equivalent, as identified by the Office of Management and Budget. The Commission adopted this definition in the First Report and Order as a relatively simple and effective means to determine which health care providers were located in rural areas and, therefore, eligible for support under the rural healthcare mechanism.³¹⁹ The Commission found that political divisions like counties are more easily identified than density-based definitions of rural and urban areas and that the use of this definition was consistent with Congress's intent to secure telecommunications services for rural healthcare providers at rates that were reasonably comparable to those received by urban health care providers.³²⁰ For the same reasons, we find that this definition will provide a simple and effective means for states to determine whether areas are rural for the purposes of identifying rural, high-cost areas served by non-rural carriers in their states.³²¹ A state should easily be able to determine how its rate zones overlap well-established political divisions and determine rates within those areas.
- 84. We believe that a state's rates in non-metropolitan counties will, in the vast majority of instances, be a reliable indicator of rural rates in the state. To provide states with additional flexibility, however, we also adopt a provision that will permit a state to identify as rural areas wire centers served by non-rural carriers within the state that are not covered by the definition of rural area in the Commission's current Part 54 rules, if the state concludes that consideration of those areas is necessary and appropriate for purposes of the rate review and expanded certification process to develop a complete picture of rate comparability in the state.³²²

See supra para 41; see also Recommended Decision, 17 FCC Rcd at 20738, para 52.

Section 54.5 defines rural area as "a non-metropolitan county or county equivalent as defined in the Office of Management and Budget's (OMB) Revised Standards for Defining Metropolitan Areas in the 1990s and identifiable from the most recent Metropolitan Statistical Area (MSA) list released by OMB, or any contiguous non-urban Census Tract or Block Numbered Area within an MSA-listed metropolitan county identified in the most recent Goldsmith Modification published by the Office of Rural Health Policy of the U.S. Department of Health and Human Services "47 C F.R. § 54.5.

³¹⁹ First Report and Order, 12 FCC Rcd at 9113-17, paras. 646-52.

³²⁰ *Id* at 9115-16, para 649

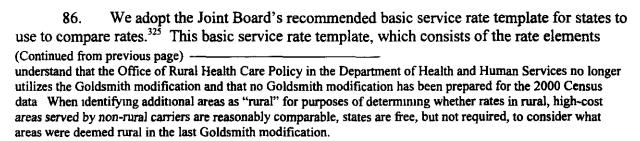
See Verizon Comments, filed April 10, 2002, at 3-4

We note that the second part of the definition of "rural area" currently used in the rural health care program includes a modification ("Goldsmith modification") to identify rural areas within metropolitan counties. We (continued)

A state choosing to identify an area as rural under this provision must do so on a wire center basis, and must explain its conclusion that the area should be treated as a rural area for purposes of the rate review process. We anticipate that few states will find it necessary to identify additional wire centers as rural areas under this provision, but conclude that providing an additional degree of flexibility to states in applying the definition of a rural area for purposes of the rate review process is appropriate to permit them to address any extraordinary circumstances that exist in their boundaries.

85. We do not adopt a wire-center based definition of rural, high-cost areas for the purposes of the rate review and expanded certification process. The Joint Board suggested that we consider defining rural, high-cost areas as all wire centers with a line density less than 540 lines per square mile. 323 Some commenters criticized the proposed wire-center definition as difficult to use and inconsistent with the non-rural support methodology's treatment of "high-cost" wire centers. Moreover, if we were to base such a definition on current data, as the Joint Board suggested, the areas considered rural under the definition would likely change every year as the line density of the average cost wire center changes. We believe that the definition we adopt will enable states to more readily identify their rural, high-cost areas than a wire-center definition.

c. Basic Service Rate Template



Recommended Decision, 17 FCC Rcd at 20736-37, para. 50 & n. 125. The Joint Board suggested that a definition based on this line density might be appropriate because, based on the data before the Joint Board, lower line densities were above the average national cost estimated by the cost model and higher line densities were below the average national cost. The Joint Board also recommended that the Commission consider whether another definition may be more appropriate. *Id.* at 20736-37 n.125.

NASUCA Comments at 14 n. 37; see also Wyoming Comments at 7. We agree with NASUCA that the Joint Board's suggested definition inappropriately implies that any area with above-average costs is "high cost" and any area with below-average costs is "low cost," because the Commission has traditionally treated as high-cost only those areas which had costs exceeding specific above-average cost benchmarks. NASUCA Comments, at 14 n.37

Recommended Decision, 17 FCC Rcd at 20739, para 54. The elements of the basic service rate template specifically identified by the Joint Board are: the rate for a line with access to the public switched network, federal subscriber line charge, state subscriber line charge (if any), federal universal service fund charge, state universal service fund charge (if any), local number portability charge, telecommunications relay service charge, 911 charges, federal universal service credits (if any), and the federal excise tax. Id These rate elements are all currently included in the annual rate survey contained in the Bureau's Reference Book. The basic service rate template also includes other rate elements that are included in the survey See Appendix F. The Joint Board recommended that in states where 911 fees are not established on a statewide basis, the state should use a statewide average 911 fee for purposes of the standard rate template. Id at 20739 n.132. The Joint Board found, and we agree, that the use of a statewide average will maintain the proper role of federal (continued...)

included in the Bureau's annual Reference Book, instructs each state which rate elements should be included in its rate review. This template will permit the Commission and each state to compare rate data with assurance that each state's data include the same rate elements. The comparison of rural and urban rates among states will be more meaningful as a result and permit more accurate assessment of the overall success of the combined federal and state efforts to achieve rate comparability. The template will also simplify the rate review for states and reduce the burden of completing the expanded certification by explicitly directing states which rate elements must be included and which, by their exclusion from the template, need not be included.

- 87. We do not include within the basic service rate template any specific reference to quality of service or scope of calling, as proposed by NASUCA.³²⁷ These factors, by their nature, are difficult to quantify and cannot be systematically incorporated in the template in a manner that appropriately reflects all circumstances. Moreover, as we discuss above, we believe that each state may be in a better position to address service quality issues within the state, and can best determine how the quality of service or calling scopes available to consumers in the state should be incorporated into its rate comparability analysis.³²⁸ The approach that we adopt minimizes administrative burdens on states, while allowing a state to show that calling scope is a significant factor in determining whether rates in its jurisdiction are reasonably comparable to urban rates nationwide.³²⁹ We seek comment in the attached Further Notice, however, on whether we should provide guidelines for states as to whether and how to address calling scopes in their rate comparability analyses.
- 88. We clarify that the availability and pricing of services provided by competitive carriers or pursuant to alternate rate plans offered by the incumbent carrier should be treated as relevant additional factors in each state's rate review, but need not be formally compared to the nationwide urban rate benchmark or included in a state's certification unless such services and rates are relevant to the state's conclusion regarding the reasonable comparability of rates. The availability and pricing of competitive services in rural and high-cost areas may be relevant to determining whether rates are reasonably comparable to urban rates nationwide. For example, the widespread availability in rural, high-cost areas of competitive services at low rates may

³²⁶ See New York Comments at 2.

³²⁷ See NASUCA Comments at 7-8.

See supra para. 47. Similarly, we conclude that it is not necessary for each state to certify separately that all of its rural consumers have calling areas comparable to those of the state's urban consumers. NASUCA Comments at 15 Each state will have the flexibility to include considerations like the scope of calling area in its determination of whether rural rates are reasonably comparable to urban rates. We note that some commenters challenge NASUCA's premise that calling area size is pertinent to rate comparability. See Sprint Comments at 7

³²⁹ Recommended Decision, 17 FCC Rcd at 20739, para. 55 ("For example, the state could show that the local calling area size is too small to be considered comparable service, and that toll or extended area service charges should be included to produce a reasonably comparable rate.").

permit a state to conclude that rates in those areas are reasonably comparable to urban rates nationwide, even if the incumbent eligible telecommunications carrier's (ETC's) basic service rate exceeds the nationwide urban rate benchmark. Thus, we agree with the Joint Board's recommendation that rates and services provided by all ETCs should be included in the rate review process.³³⁰ We agree, however, with CUSC that the basic service rate template cannot necessarily be applied to the rates of competitive carriers, whose rates generally are not regulated by the Commission or the states and do not always include the rate elements specified in the template.³³¹ The basic service rate template also is not necessarily applicable to alternate, non-flat rate plans provided by incumbent local exchange carriers. We believe the approach we adopt provides appropriate flexibility for states to address competitively-provided services and alternative rate plans, without requiring states to "fit" non-conforming rates into the basic service rate template.

d. Expanded Certification Process

- 89. As recommended by the Joint Board, we adopt an expanded certification process in which each state will provide information to the Commission regarding the comparability of the rates in rural areas served by non-rural carriers within the state to urban rates nationwide. 332 The existing certification process requires states to certify that all ETCs receiving federal universal service funding pursuant to the non-rural high-cost mechanism are using the funds to achieve the goals of the Act. 333 The new certification process will expand reporting requirements to address reasonable rate comparability. Pursuant to the expanded certification process, each state will be required to state whether its rates in rural areas served by non-rural carriers are reasonably comparable to urban rates nationwide and explain the basis for its conclusion as well as its proposed remedies, if necessary.
- 90. In the expanded certification process, states will report on rate comparability in one of several ways. If a state's rural rates are within the safe harbor provided by the urban rate benchmark, its rates may be presumed reasonably comparable. We anticipate that most states will certify to this effect and will not be required to file any additional explanation or supporting data. Other states, however, will be required to support their certifications with explanations and supporting data, including the rate data for residential customers in rural areas served by non-rural carriers. A state with rural rates within the safe harbor that nevertheless certifies that its rural rates are not reasonably comparable to urban rates nationwide based on its analysis of other relevant factors must fully explain its analysis, its proposed method of identifying and implementing a means of achieving rate comparability, and supporting data that show the rates

Recommended Decision, 17 FCC Rcd at 20736-37, para. 50.

³³¹ CUSC Comments at 8-10

Recommended Decision, 17 FCC Rcd at 20739-40, para. 55.

³³³ 47 C.F.R § 54.313(a); see Ninth Report and Order, 14 FCC Rcd at 20483, para. 97

paid by its residential consumers in rural areas served by non-rural carriers.³³⁴ Rural rates outside the safe harbor may be presumed not reasonably comparable, and a state so certifying must explain its proposed course of action to address its failure to achieve reasonable comparability and submit rate data for the rural areas within the state served by non-rural carriers. A state's consideration of other relevant factors, however, may overcome the presumption that its rural rates are not reasonably comparable to urban rates nationwide.³³⁵ In this case, the state should explain its rate analysis and submit relevant rate data.

- 91. We conclude that this expanded certification should be filed at the same time as the existing certification that states must file pursuant to section 254(e) of the Act, according to the schedule set forth in section 54.313(d)(3) of the Commission's rules, using the rates in effect as of the prior July 1.³³⁶ Using the existing filing schedule will minimize burdens and simplify filings for the states. Using rates as of the prior July 1 will give the states maximum time to review their rates and prepare their certifications, while still ensuring the use of rates from the same federal tariff year that the filing occurs. As with the existing certification, the expanded certification must be filed with the Universal Service Administrative Company and the Commission.³³⁷ In order to provide states with adequate time to conduct their initial rate review and begin complying with the rules we adopt today, we conclude that the initial filing pursuant to the expanded certification shall not be due until October 1, 2004. We believe that this will provide states with adequate time to develop processes for conducting their rate reviews.
- 92. We agree with NASUCA that the certification will effectively induce states to adopt measures to promote reasonable comparability only if it is a condition of receiving non-rural high-cost support. ³³⁸ Given the importance of state rate review to ensuring the continued achievement of reasonably comparable rural and urban rates nationwide, we find that it is appropriate to condition the receipt of non-rural high-cost support on the completion of the expanded certification process. Moreover, the conditioning of support on completion of the expanded certification is consistent with the existing section 254(e) certification, which is also a condition of support. Accordingly, non-rural carriers in any state that does not complete the certification will not receive non-rural high cost support.

e. Ability of States to Request Further Federal Action

93. We adopt the Joint Board's recommendation to permit states to request further

Other relevant factors that might lead a state to reach this conclusion may include, but are not limited to, poor service quality or small calling areas that materially limit the value of the service received. See Recommended Decision, 17 FCC Red at 20736-37, para. 50

For example, a state could conclude that a high degree of subscribership in rural areas to a non-flat rate basic service plan indicates that many of those subscribers in fact receive basic service at a rate reasonably comparable to urban rates nationwide.

³³⁶ 47 U.S C § 254(e), 47 C.F.R § 54.313(d)(3).

³³⁷ 47 C.F.R § 54.313(a)

³³⁸ NASUCA Comments at 14.

federal action, if necessary, based on a showing that federal and state action together are not sufficient to achieve reasonable comparability of basic service rates in rural, high-cost areas served by non-rural carriers within the state to urban rates nationwide. Further federal actions could include, but are not limited to, additional targeted federal support or actions to modify calling scopes or improve quality of service where state commissions have limited jurisdiction. The ability to request further federal action provides a means to address any isolated failures to achieve reasonable comparability of rural rates that may require extraordinary efforts to resolve. Consistent with the Joint Board's recommendations, we will require that any request for further federal action fully explain the basis of the request, including a demonstration that the state's rural rates are not reasonably comparable to urban rates nationwide and that the state has taken all reasonably possible steps to achieve reasonable comparability through state action and existing federal support. The provided in the state of the provided in the state of the state of the state of the provided in the provided

- 94. On receipt of a request for further federal action, the Wireline Competition Bureau will expeditiously issue a public notice seeking comment on the request.³⁴² Although we expect the Commission to act as rapidly as possible, we note that a request for further federal action will necessarily involve consideration of a wide range of issues, including rates in non-rural carriers' service areas throughout the state and state universal service mechanisms. We further note that, although we expect requests for further federal action to be rare, it is possible that multiple requests for further federal action may be filed at the same time.³⁴³
- 95. We reject arguments that we should not adopt the Joint Board's recommendation to permit states to seek further federal action because the process is ill-defined.³⁴⁴ Because the ability to request further federal action is intended to address isolated, unique circumstances, we concur with the Joint Board's recommendation that states should be afforded great flexibility in showing that further federal action is required.³⁴⁵ Moreover, we agree with the Wisconsin Commission that flexibility in making the required showings is appropriate because it is not possible at this time to predict all future circumstances that may require further federal action, and retaining flexibility will permit states to adapt their showings to fit the circumstances.³⁴⁶ We recognize, however, that the process should also be as clearly defined as possible. We seek

Recommended Decision, 17 FCC Rcd at 20736-37, para. 50.

³⁴⁰ *Id*.

³⁴¹ Recommended Decision, 17 FCC Rcd at 20736-37, 40, paras. 50, 56

The public notice will set forth the pleading schedule. See also 47 C.F.R. §§ 1.4, 1.45.

The Commission does not anticipate acting on any state requests for further action while the Further Notice is pending. See infra part V.C.

California Comments at 14, CUSC Comments at 13-14, Montana and Vermont Comments at 39, New York Comments at 2-3.

Recommended Decision, 17 FCC Rcd at 20740, para. 56.

³⁴⁶ Wisconsin Comments at 3-4

comment in the attached Further Notice of Proposed Rulemaking, therefore, on proposals that will better define the process for states and ensure predictable results. In particular, we seek comment on the timing of such requests, and on a flexible showing including the factors identified by the Joint Board. We also seek comment on a methodology to determine any additional targeted federal support on a wire-center basis using model cost estimates.

We reject arguments that permitting states to request further federal action, 96. including additional targeted federal support, raises sufficiency concerns. 347 Above, we conclude that the non-rural support mechanism is sufficient to achieve the goal of making rural and urban rates reasonably comparable.³⁴⁸ The availability of further federal action, based upon a state's request, to address isolated and unique problems does not undermine that conclusion. Moreover, we reject arguments that further federal action cannot be conditioned on a state's request because it may be necessary to achieve reasonable comparability of rates.³⁴⁹ We agree with the Joint Board that the burden must fall on the state to demonstrate the reasons underlying the failure to achieve reasonable comparability, because only the state is in a position to identify the existence and sources of problems that may be unique to that state. 350 Additionally, those commenters argue, essentially, that the Commission's obligation to provide sufficient support to assure the reasonable comparability of rates among states prevents the Commission from conditioning further federal action on a state's demonstration that it has made full use of its resources in attempting to achieve reasonable comparability of rates.351 To the contrary, the Qwest court recognized that state action is an integral part of achieving the Act's universal service goals, and expressly held that the Commission could not simply provide support without also providing an inducement for state action.³⁵² Where state action is necessary to achieve the Act's goals--such as the reasonable comparability of rates--the Commission has an obligation to ensure that states fulfill their part of the federal-state partnership.

E. Complete Plan for Supporting Universal Service

97. In this section, we review our comprehensive plan for supporting universal service in high-cost areas. As discussed below, the Commission has taken important steps to reform the federal high-cost support system and to ensure its overall sufficiency, but our task is

California Comments at 15; New York Comments at 2 & n.5; see also AT&T Reply at 9; Michigan Reply at 3, Worldcom Reply at 4.

³⁴⁸ See supra paras. 55-61.

Montana and Vermont Comments at 32-33

Recommended Decision, 17 FCC Rcd at 20740, para 56, see also supra para 22; NASUCA Comments at 14-15, Verizon Comments at 6

Montana and Vermont Comments, at 33-39.

³⁵² Qwest, 258 F.3d at 1203-04 As Verizon notes, the only inducements available to the Commission derive from its ability to condition some federal action--whether non-rural universal service support or further federal action--on a state's showing that it has taken the actions necessary to achieve the Act's universal service goals. Verizon Comments at 16-17

not done. The Commission continues to adapt the overall plan to meet changing conditions, and to implement the various components of the plan on a sequenced, coordinated basis.

- 98. The Tenth Circuit recognized that it could not "properly assess the total level of federal support for universal service to ensure 'sufficiency'" because the *Ninth Report and Order* concerns only intrastate high-cost support for non-rural carriers. In particular, the court noted that the Commission had reserved the possibility of applying a different funding mechanism for rural carriers. In addition, the court noted that in the *Ninth Report and Order*, which deals with reforming explicit federal support, the Commission had stated its intention to address the implicit federal support built into interstate access charges in a separate order. The court did not "necessarily require the FCC to resolve finally all of these issues at once," but stated that "[o]n remand, the FCC will have an opportunity to explain further its complete plan for supporting universal service." 3555
- 99. Prior to the court's decision, the Commission had adopted significant universal service and interstate access charge reforms, in particular for the larger, price cap carriers.³⁵⁶ In May 1997 companion orders, the Commission modified the existing federal universal service support mechanisms to make them explicit, competitively neutral, and sustainable in an increasingly competitive telecommunications marketplace.³⁵⁷ The Commission also adopted measures to remove implicit subsidies from interstate access charges and move them toward lower, cost-based levels for price cap carriers, by phasing out loop and other non-traffic sensitive costs from per-minute charges, and providing for recovery of such costs through more economically efficient, flat charges.³⁵⁸ In 1999, the Commission adopted a forward-looking cost

³⁵³ Qwest, 258 F.3d at 1204.

³⁵⁴ Id at 1205.

³⁵⁵ Id at 1205.

The term "price cap carrier" refers to local exchange carriers (LECs) that are subject to price cap regulation of interstate revenues. The Commission implemented price cap regulation for the largest LECs in 1991. Almost all non-rural carriers are subject to price cap regulation.

See First Report and Order, 12 FCC Rcd 8776; Access Charge Reform, CC Docket No. 96-262, First Report and Order, 12 FCC Rcd 15982 (1997) (Access Charge Reform First Report and Order). Local switching support and high-cost loop support, previously funded entirely by interexchange carriers, now are funded by all telecommunications carriers that provide interstate telecommunications services on an equitable and nondiscriminatory basis. See First Report and Order, 12 FCC Rcd 8940-42, para. 303-304, 47 U.S.C. § 254(d). In addition, the Commission adopted rules to make federal high-cost support available or "portable" to all ETCs on a competitively- and technologically-neutral basis. First Report and Order, 12 FCC Rcd at 8932-8934, paras. 286-290, 8944-8945, paras. 311-313.

Access Charge Reform Order, 12 FCC Rcd at 15998, para 35. The Commission recognized that rate structure modifications alone might not "create a system that accurately reflects the true cost of service in all respects." Id at 16001, para. 42. But it concluded that relying primarily on competition to drive access charges down to cost-based levels would serve the public interest better than prescribing rates. Id at 16001-02, paras. 44-46. The Commission reasoned that a market-based approach was more consistent with the 1996 Act, and that tools for accurately prescribing rates at economic cost levels were not yet available. The Commission also (continued ...)

model for calculating intrastate high-cost support for non-rural carriers and the order at issue in this proceeding.³⁵⁹ In 2000, it adopted additional access charge reforms and created a new, explicit support mechanism for price cap carriers in the *CALLS* proceeding.³⁶⁰ The Commission decided to proceed more cautiously in reforming universal service and access charges for the smaller, rate-of-return carriers, in recognition of the differences between these carriers and the larger carriers.³⁶¹

100. In 2001, the year the Tenth Circuit remanded the Ninth Report and Order to the Commission, the Commission completed the universal service and interstate access charge reforms it initiated following passage of the 1996 Act. In particular, in the May 2001 Rural Task Force Order, the Commission adopted a modified embedded cost mechanism for rural carriers for a five-year period. The Commission found that continuing to base intrastate high-cost support for rural carriers on embedded costs for five years, rather than attempting to modify the forward-looking high-cost support mechanism for non-rural carriers so that it could be applied to rural carriers, was a reasonable and prudent approach to take in light of the record in the

³⁵⁹ See supra para. 6.

Access Charge Reform, Price Cap Performance Review for LECs, CC Docket Nos. 96-262 and 94-1, Sixth Report and Order, Low-Volume Long-Distance Users, CC Docket No. 99-249, Eleventh Report and Order, 15 FCC Rcd 12962, 13046, para. 201 (2000) (CALLS Order) (subsequent history omitted). In a subsequent Order on Remand in the CALLS proceeding, the Commission concluded, among other things, that the \$650 million Interstate Access Support amount included in the integrated CALLS plan more appropriately balanced than would a higher or lower support amount the Commission's various policy goals, including the availability of service in all areas at rates that are affordable and reasonably comparable to nationwide rates, the promotion of competition and efficient investment in rural America, and the facilitation of the transitional reforms of the access rate structure adopted in the CALLS Order. Access Charge Reform, Price Cap Performance Review for LECs, Low-Volume Long Distance Users, Federal-State Joint Board on Universal Service, CC Docket Nos. 96-262, 94-1, 99-249, 96-45, Order on Remand, FCC 03-164 (released July 10, 2003).

³⁶¹ See First Report and Order, 12 FCC Rcd at 8899, 8936, paras. 224, 294; Access Charge Reform First Report and Order, 12 FCC Rcd at 16126-27, paras. 330-332. The term "rate-of-return carrier" refers to LECs subject to rate-of-return regulation of interstate revenues. Most, but not all, rate-of-return carriers also meet the definition of rural telephone company. See supra note 1.

Rural Task Force Order, 16 FCC Rcd 11244. In the First Report and Order, the Commission determined that federal high-cost support should be based on forward-looking economic costs, but that non-rural carriers would transition to forward-looking mechanisms first. See First Report and Order, 12 FCC Rcd at 8899, 8935-36, paras. 224, 293-294. Subsequently, the Joint Board established the Rural Task Force to assist in developing a forward-looking mechanism appropriate for rural carriers. The Rural Task Force recommended modifying the existing high-cost loop support mechanism for a five-year period, rather than attempting to modify the non-rural mechanism so that it could be applied to rural carriers. The Joint Board recommended that the Commission use the Rural Task Force recommendation as a foundation for implementing a universal service plan for rural carriers for five years, and undertake a comprehensive review of the high-cost support mechanisms for rural and non-rural carriers to ensure that both mechanisms function efficiently and in a coordinated fashion. See Federal-State Joint Board on Universal Service, Recommended Decision, CC Docket No. 96-45, 16 FCC Rcd 6153, 6158, 6162, paras. 13, 21 (2000)

proceeding.³⁶³ The Commission also found that the modified embedded cost mechanism would provide sufficient support for purposes of section 254.³⁶⁴ The Commission stated that it would use the transitional period during which a modified embedded cost mechanism is in place to develop a long-term universal service plan that better targets support to rural carriers serving the highest cost areas, while recognizing the significant distinctions among rural carriers and between rural and non-rural carriers.³⁶⁵

system for rate-of-return carriers and established the interstate common line support (ICLS) mechanism, building on interstate access charge reforms previously implemented for price cap carriers, consideration of the Multi-Association Group (MAG) plan, and the record developed in several interrelated proceedings. The Commission designed the ICLS mechanism to provide support equal to the interstate loop costs that rate-of-return carriers do not recover through revenues from Subscriber Line Charges, which are capped to ensure affordability. ICLS ensures recovery of revenues that rate-of-return carriers previously recovered through per-minute access charges containing implicit support. The Commission explained that this cautious approach was appropriate based on examination of the record in the proceeding, and that ICLS would safeguard this important revenue stream for rate-of-return carriers.

³⁶³ See Rural Task Force Order, 16 FCC Rcd at 11248-49, paras. 8-10.

³⁶⁴ See Rural Task Force Order, 16 FCC Red at 11258, para. 28. Although a number of commenters argued generally that the Rural Task Force plan would provide support that is either inadequate or excessive, neither side of the debate proffered specific evidence supporting their positions. Id at 11257-58, para. 27. The Commission also specifically rejected the contention that no increase in high-cost loop support was warranted, concluding that it was reasonable to modify the high-cost loop support levels established in 1997 for rural carriers to account for changes in costs and technology, in order to ensure that rural carriers can maintain existing facilities and make prudent facility upgrades until such time as a long-term rural plan is adopted. Id at 11258, para. 28.

³⁶⁵ See Rural Task Force Order, 16 FCC Rcd at 11310-13, paras. 169-177.

See Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent LEC and IXCs, Second Report and Order and Further Notice of Proposed Rulemaking in CC Docket No. 00-256, Fifteenth Report and Order in CC Docket No. 96-45, and Report and Order in CC Docket Nos. 98-77 and 98-166, 16 FCC Rcd 19613, 19615-16, para. 1 (2001) (MAG Order and MAG Further Notice). With limited exceptions, the interstate access charge reforms adopted in the 1997 Access Charge Reform Order applied only to price cap carriers. See Access Charge Reform Order, 12 FCC Rcd at 16126-27, paras. 330-332. In 1998, the Commission created a separate docket to undertake more comprehensive review of the issues and circumstances specific to rate-of-return carriers. See Access Charge Reform for Incumbent Local Exchange Carriers Subject to Rate-of-Return Regulation, CC Docket No. 98-77, Notice of Proposed Rulemaking, 13 FCC Rcd 14238, 14240, paras. 3-4 (1998). While it proposed reforms similar to those adopted for price cap carriers, the Commission recognized that differences between the two groups might warrant a different approach in some matters, including a different transition to more efficient, cost-based rates. Id. at 14250-52, paras. 35-36, 39. This docket remained open when the MAG plan was submitted by four LEC associations in 2000.

³⁶⁷ See 47 C.F.R. § 54.901. See also MAG Order, 16 FCC Rcd at 19673-74, para. 142.

MAG Order, 16 FCC Rcd at 19668-69, paras. 130-131. The Commission observed in the CALLS Order, which continued the process of access charge reform for price cap carriers, that "identifying an amount of implicit support in our interstate access charge system is an imprecise exercise." CALLS Order, 15 FCC Rcd at 13046, (continued.)

- 102. Thus, today, in addition to non-rural high-cost support, universal service support is provided in rural and high-cost areas through the following mechanisms: high-cost loop support; local switching support (LSS); interstate access support (IAS); and interstate common line support (ICLS). Each of these other mechanisms provides support to eligible telecommunications carriers for a portion of the cost of providing telephone service in rural and high-cost areas, based generally on costs averaged at the study-area level. With the exception of LSS, each of these mechanisms defrays the costs of the common line or loop that connects an end user to the LEC central office. The non-rural high-cost support mechanism is a relatively small portion of overall federal high-cost support: roughly \$233 million out of \$3.2 billion provided in 2002.
- 103. The amount of federal high-cost support available to an incumbent carrier differs according to the size, population density, and topography of the incumbent carrier's study area, whether the costs of service are allocated to the state or federal jurisdiction, and whether the incumbent carrier's interstate access service is subject to price cap or rate-of-return regulation. Rural carriers are eligible for high-cost loop support to cover intrastate loop costs, based on the degree to which their average embedded loop costs exceed 115 percent of the national average

(Continued from previous page)

para 201 The Commission explained that the "various implicit support flows (e.g., business to residential, highvolume to low-volume, and geographic rate averaging) are not easily severable and quantifiable. Moreover, the
competitive pricing pressures present during this transitional period between monopoly and competition present
additional complexities in identifying a specific amount of implicit support." Id In the MAG Order, the
Commission noted that the difficulty of determining the amount of implicit support contained in interstate access
charges is even greater for rate-of-return carriers than for price cap carriers, given their size, diversity, and
regulatory history. MAG Order, 16 FCC Rcd at 19668-69, para. 130.

- See 47 C.F.R. §§ 36.601-36.631 (high-cost loop support), 54.301 (LSS), 54.800-809 (IAS), 54.901-54.904 (ICLS). In the MAG Further Notice, the Commission tentatively concluded that Long Term Support should be merged into ICLS beginning July 1, 2003. See MAG Further Notice, 11 FCC Rcd at 19725-26, para. 274. Under each of the federal high-cost support mechanisms, competitive ETCs serving customers in the incumbent carrier's service area normally receive the same per-line amount of support that the incumbent carrier would receive. 47 C.F.R. § 54.307(a). In a November 2002 Referral Order, the Commission requested that the Joint Board review and provide recommendations regarding the Commission's rules related to the calculation of support in study areas with multiple ETCs. Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Order, 17 FCC Rcd 22642 (2002) (Referral Order); Federal-State Joint Board on Universal Service Seeks Comment on Certain of the Commission's Rules Relating to High-Cost Universal Service Support and the ETC Designation Process, CC Docket No. 96-45, Public Notice, 18 FCC Rcd 1941 (2003).
- Non-rural high-cost support is generally targeted to high-cost wire centers, and IAS is targeted to state-created unbundled network element (UNE) zones, where such zones exist. See 47 C.F.R. §§ 54.309, 54.803. The Commission's rules also permit disaggregation and targeting of high-cost loop support, LSS, and ICLS to geographic areas below the study-area level. See 47 C.F.R. §§ 54 307(a)(1); 54 315
- ³⁷¹ See Federal-State Joint Board on Universal Service, Forward-Looking Mechanism for High Cost Support for Non-Rural LECs, CC Docket Nos 96-45, 97-160, Fifth Report and Order, 13 FCC Rcd 21, 323, 21,335 (1998) ("Outside plant, or loop plant, rather than switching or interoffice transport plant, constitutes the largest portion of total network investment, particularly in rural areas.").
- ³⁷² See Federal Universal Service Support Mechanisms Fund Size Projections and Contribution Base for the Fourth Quarter 2002, Appendix HC 01 (Universal Service Administrative Company, August 2, 2002).

loop cost.³⁷³ LSS is designed to cover some of the intrastate switching costs of carriers serving study areas with 50,000 or fewer lines, in recognition of such carriers' high average fixed switching costs compared to larger carriers with greater economies of scale.³⁷⁴ ICLS was created to replace implicit support in the rate-of-return carriers' interstate access charges, and recovers the difference between each carrier's permitted common line revenues and its actual revenues from capped subscriber line changes (SLCs).³⁷⁵ Similarly, IAS provides price cap carriers with support for a portion of their price cap CMT revenues that cannot be recovered through capped SLCs.³⁷⁶

- 104. In implementing the provisions of the 1996 Act, the Commission consistently has taken into consideration the differences between large, price-cap regulated non-rural carriers and small, rate-of-return regulated rural carriers and will continue to do so. The Commission also has taken into account the appropriate federal and state roles in supporting reasonable, affordable and reasonably comparable local rates. In the case of each federal high-cost support mechanism, the Commission has used its expertise and informed judgment to make a reasonable determination as to what constitutes "sufficient" support for purposes of section 254(e), in light of the particular circumstances and the statutory policies the mechanism serves. In doing so, the Commission has kept close track of the total size of the federal universal service fund. As a result of the Commission's reforms, there are explicit, specific, predictable, and sufficient federal high-cost support mechanisms in place to defray both the intrastate- and the interstate-allocated costs of the common line or loop, the largest portion of total network investment, particularly in rural areas.³⁷⁷
- 105. Overall, we believe that the federal high-cost support system has proved sufficient to preserve and advance universal service, consistent with the mandate of section 254. Local telephone service subscribership is currently at 95.3%, and within the last year subscribership

See 47 C.F.R. § 36.631. Specifically, high-cost loop support is available for 65% of costs exceeding 115% of the national average loop cost and 75% of costs exceeding 150% of the national average loop costs. The national average loop cost has been frozen at \$240.00. See 47 C.F.R. § 36.621. High-cost loop support is subject to an indexed cap which limits the growth in the total support available each year. See id. at 36.601(c). As discussed above, the term "rural carrier" refers to LECs that meet the "rural telephone company" definition in section 153(37) of the Act. 47 U.S.C. § 153(37). See supra note 1.

LSS is the product of a LEC's annual unseparated local switching revenue requirement multiplied by its local switching support factor, which is defined as the difference between the 1996 weighted interstate Dial Equipment Minutes (DEM) factor and the 1996 unweighted DEM factor. See 47 C.F.R § 54.301.

³⁷⁵ See 47 C.F R. § 54.901. See also MAG Order, 16 FCC Rcd at 19673-74, para. 142

⁴⁷ C.F.R. § 54.804; see CALLS Order, 15 FCC Rcd at 13049-55, paras. 206-13. The Commission established the IAS mechanism in the CALLS Order as part of a five-year transitional access charge and universal service reform plan for price cap carriers. Id at 12962. The total amount of IAS is limited to \$650 million each year: the IAS mechanism applies mathematical formulas to apportion support among ETCs in price cap carrier service areas. 47 C.F.R. § 54.801 The term "price cap CMT revenues" refers to a price cap carrier's common line, marketing, and transport interconnection charge revenues. 47 C.F.R. § 54.800.

As discussed above, the LSS mechanism also defrays high fixed local switching costs for small LECs. See supra para. 103.

was 95.5%, the highest level of subscribership ever recorded.³⁷⁸ As the Joint Board observed, the GAO Report findings generally support the conclusion that basic local service rates in rural and high-cost areas are reasonably comparable to those in urban areas.³⁷⁹ In concert with other reforms to the interstate access rate structure adopted in the *CALLS* and *MAG Orders*, the IAS and ICLS mechanisms have reduced the recovery of interstate common line costs through inefficient rate elements containing implicit support and facilitated the transition toward fuller, more rational competition, while ensuring that rates and services in rural and high-cost areas remain affordable and reasonably comparable to those in urban areas.³⁸⁰

- our task is not done. The Commission has taken important steps to reform universal service, our task is not done. The Commission has taken a market-based approach to interstate access charge reform, relying largely on competition to identify and remove implicit subsidies from access charges and drive them down to cost-based levels. The IAS mechanism was adopted as part of the integrated, five-year CALLS plan for transitioning to more efficient competition, lower rates for consumers, and secure universal service support mechanisms. As the term of the CALLS plan nears its end, the Commission will need to consider what measures are appropriate for the future. Likewise, the access charge and universal service reforms for rate-of-return carriers adopted in the MAG Order "are not designed as a permanent solution." The pending intercarrier compensation proceeding, in which the Commission is fundamentally reexamining all currently-regulated forms of intercarrier compensation, raises implications for our universal service plan.
- 107. Furthermore, as discussed above, the Rural Task Force Order adopted modifications to the high-cost loop support mechanism for rural carriers for an interim, five-year

³⁷⁸ See Industry and Technology Analysis Division, Wireline Competition Bureau, Telephone Subscribership in the United States (April 2003) (*Telephone Subscribership Report*). See also AT&T Comments at 11 (citing November 2002 *Telephone Subscribership Report*).

Recommended Decision, 17 FCC Rcd at 20728-29, para. 34, supra note 21. According to Bureau of Labor Statistics figures, urban households continue to spend more on telephone service, including local and long-distance service, than do rural households. See Reference Book, Table 2.1 (average annual expenditures on telephone service by household locations).

³⁸⁰ In particular, the IAS mechanism has helped to reduce by \$2.6 billion the recovery of common line costs by price cap carriers through inefficient rate elements containing implicit support. *Access Charge Reform, Price Cap Performance Review for LECs*, CC Docket Nos. 96-262 and 94-1, Order on Remand, 15 FCC Rcd 12962, 13046, para, 201 (released July 10, 2003).

³⁸¹ See supra note 358.

See supra note 360 and accompanying text

MAG Order, 16 FCC Rcd at 19620, para. 13 ("In particular, as the terms of the CALLS plan and the Rural Task Force plan near their respective ends, we anticipate that the Commission will review whether the measures we adopt here continue to be consistent with our competitive goals for the local exchange and exchange access services markets, as well as with our long-term universal service plans.").

Developing a Unified Intercarrier Compensation Regime, CC Docket No. 01-92, Notice of Proposed Rulemaking, 16 FCC Rcd 9610 (2001).

period. The Commission must and will initiate a proceeding to address the appropriate intrastate high-cost support mechanism for rural carriers after the Rural Task Force plan expires, as well as how to ensure that the intrastate support mechanisms for rural and non-rural carriers function efficiently and in a coordinated fashion.³⁸⁵ The Commission also has pending proceedings to reexamine its assessment methodology for contributions to universal service, and its rules for determining high-cost support in areas served by multiple ETCs, to ensure that its policies remain competitively neutral and ensure a sustainable universal service fund in light of changes in the telecommunications marketplace.³⁸⁶ As the Commission previously has recognized, "[o]ur universal service rules cannot remain static in a dynamic marketplace."³⁸⁷ We will continue to develop and refine our universal service rules and policies in a coordinated manner to fulfill the mandate of the 1996 Act.

V. FURTHER NOTICE OF PROPOSED RULEMAKING

In this Further Notice of Proposed Rulemaking, we seek further comment on issues related to the rate review and expanded certification process that we adopt in the foregoing Order. 388 First, we seek comment on whether we should require states to file, in connection with their reasonable comparability certifications, additional data that might enhance the Commission's ability to assess the non-rural mechanism and state actions to achieve comparability of urban and rural rates, including business rate data, rate data for non-rural areas served by non-rural carriers, and rate data from states that would not otherwise be required to file data under the rules we adopt today. Second, we seek comment on the role of calling scopes in the rate review process. Third, we seek comment on how to treat any state requests for further federal action, including procedures for states to submit any such requests, required showings by requesting states, and how to calculate any additional targeted federal support. In addition, we propose a method for calculating additional targeted federal support on a wire-center basis using forward-looking model cost estimates. Finally, we seek comment on a proposal to further encourage states to advance the Act's universal service goals by making available additional targeted federal support to states that implement explicit universal service mechanisms, without regard to their achievement of rate comparability.

See Rural Task Force Order, 16 FCC Rcd at 11310, para. 169; Remand Notice, 17 FCC Rcd at 3011, paras. 27-28.

See Federal-State Joint Board on Universal Service, CC Docket No. 96-45, 1998 Biennial Regulatory Review—Streamlined Contributor Reporting Requirements Associated With Administration of Telecommunications Relay Service, North American Numbering Plan, Local Number Portability, and Universal Service Support Mechanisms, CC Docket No. 98-171, Telecommunications Services for Individuals With Hearing and Speech Disabilities, and the Americans With Disabilities Act of 1990, CC Docket No. 90-571, Administration of the North American Numbering Plan and North American Numbering Plan Cost Recovery Contribution Factor and Fund Size, CC Docket No. 92-327, NSD File No. L-00-72, Number Resource Optimization, CC Docket No. 99-200, Telephone Nmber Portability, CC Docket No. 95-116, Truth-In-Billing and Billing Format, CC Docket No. 98-170, Report and Order and Second Further Notice of Proposed Rulemaking, 17 FCC Rcd 24952 (2002); Referral Order, 17 FCC Rcd 22642

Rural Task Force Order, 16 FCC Rcd at 11249, para. 11.

³⁸⁸ See supra part IV.D.

A. Collection of Additional Rate Data

- We seek comment on whether all states should submit rate data to the Commission in connection with the rate review and expanded certification process, in order to establish a more complete picture of state efforts to achieve rate comparability. In the foregoing Order, we adopt rules that require a state to file, in connection with its expanded certification, rate data for rural areas served by non-rural carriers only if its rural rates exceed the nationwide urban rate benchmark or if it certifies that its rural rates are not reasonably comparable to urban rates nationwide, despite being within the safe harbor established by the nationwide urban rate benchmark. 389 These data, along with the expanded certifications filed by all states, will aid the Commission in its review of the reasonable comparability of rural and urban rates nationwide.³⁹⁰ We seek comment on whether collecting additional rate data from a larger number of states, either on a mandatory or voluntary basis, would provide the Commission with a better basis for its review.³⁹¹ To what extent would collecting additional rate data from all states improve the Commission's ability to assess the reasonable comparability of rural and urban rates nationwide through the rate review and expanded certification process? To what extent would the availability of this additional rate data improve the ability of each state to analyze its own rate comparability issues? To what extent would the availability of this additional rate data improve the ability of other interested parties to monitor the reasonable comparability of rural and urban rates nationwide? We anticipate that each state will have assembled much of the additional data in the course of performing its rate review. Would it be unduly burdensome if all states were to file such data?
- business rates, in addition to residential rates.³⁹² A meaningful comparison of rates across different states may necessarily include business rates in addition to residential rates. For example, because Wyoming, unlike many other states, has rebalanced its single-line business rates to levels equivalent to residential rates, Wyoming's residential rates no longer rely on implicit support flows from its business rates, and its business customers pay lower rates than they would in a state that relied on such implicit support flows.³⁹³ Collecting data only on residential rates, therefore, may not permit the Commission to identify the specific nature of any problems with reasonable comparability. Would collecting data on business rates provide the Commission with a more useful picture of the local rates charged in rural areas? Would

See supra part IV.D.2.d.

³⁹⁰ See supra para 79

³⁹¹ See WorldCom Reply at 3.

In its Recommended Decision, the Joint Board "suggest[ed] that it may be appropriate to solicit comment as to whether . . . residential and business rates should eventually be reviewed by the states." Recommended Decision, 17 FCC Rcd at 20738, para. 53. We do not seek comment at this time on whether business rates should be included in the rate review process. We do believe, however, that collecting business rate data for some period of time might prepare us to better address the issue of whether business rates should be included in the rate review or expanded certification at a later date.

³⁹³ See Wyoming Comments, at 2, 8.